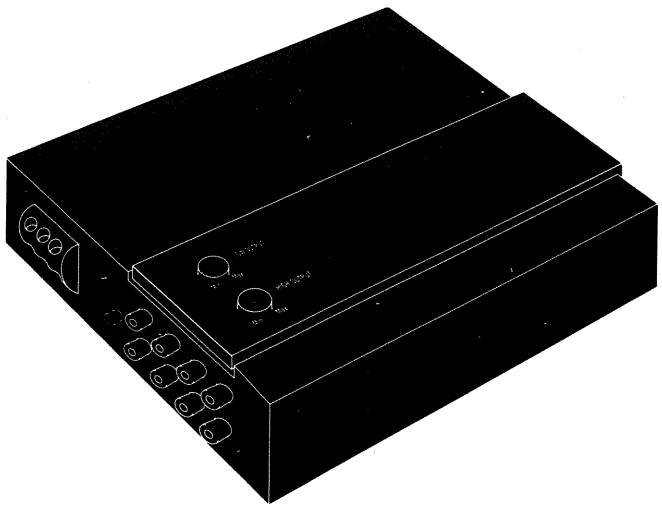
The Harman Kardon
Model CXO-2L

Manual 174A

AUTOMOTIVE ELECTRONIC CROSSOVER

Technical Manual



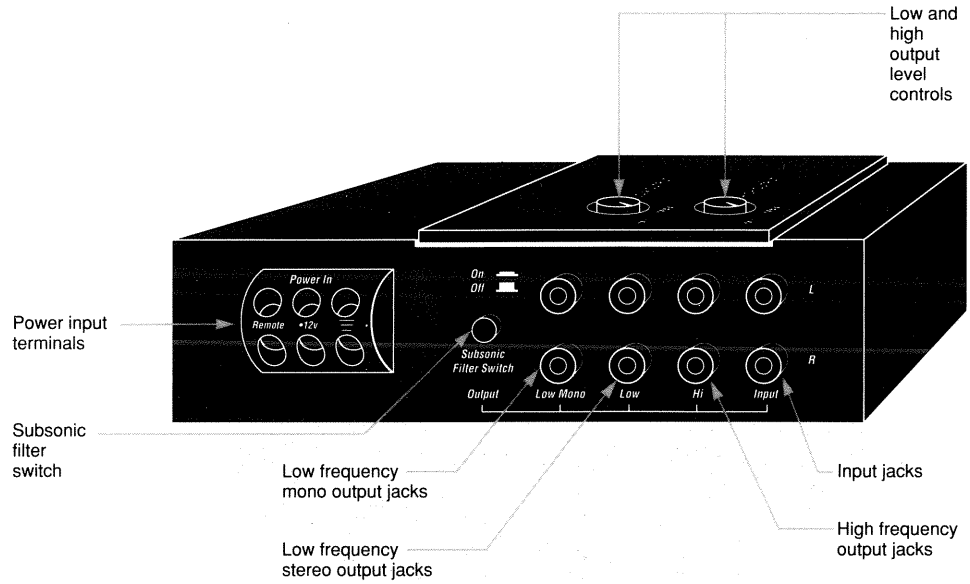
The following marks found in the parts list of this manual identify the models as follows.
(I) :International model
(N) :Japan mode

harman/kardon
Parts and Service Office
240 Crossways Park West,Woodbury,N.Y. 11797
1112-3152174A7 P-129105 1200 Printed in Japan

SPECIFICATIONS

System Configuration :	2-Way for Woofer and Subwoofer Application
Filter Type :	4th Order Bessel (24dB/Octave)
Sub/Low Channel Low-Pass Frequencies :	80Hz (can be varied from 50Hz-320Hz)
High Channel High-Pass Frequencies :	200Hz (can be varied from 50Hz-320Hz)
Subsonic Filter :	5Hz/50Hz (switchable)
Input/Output Gain :	+6dB (level controls max)
Maximum/Output Level (0.1% THD) :	4.0 Volts RMS
THD at 1.0 Volts :	Less than 0.05%
Frequency Response (All Channels Summed) :	5Hz-100kHz +0/-3dB
Signal-to-Noise Ratio (A-WTD, 1.0 Volts) :	100dB
Input Impedance :	22kΩ
Output Impedance :	2.5kΩ

CONTROLS



SELECTING NEW CROSSOVER FREQUENCIES

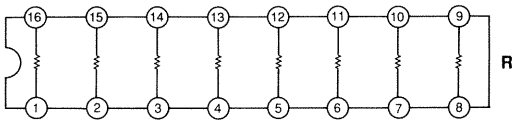
If your system requires crossover frequencies different from the factory settings, they can be obtained by determining new resistor module values and then replacing the factory modules with modules of the new values. To determine the new values, see the following chart.

The resistor value can also be calculated by dividing 820,000 by the desired crossover frequency.

The chart only shows standard resistor module values. Many values are available from your Harman Kardon car audio dealer. As an alternative, they can also be obtained from electronic components dealers.

We strongly recommend against the use of crossover frequencies below 50Hz and above 320Hz.

RA101, RA201
RESISTOR MODULES



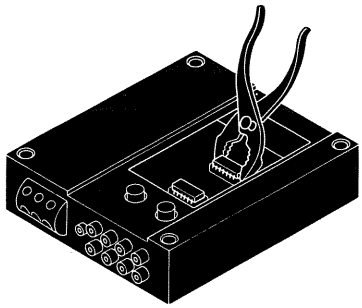
$$R = \frac{820{,}000}{\text{Crossover Frequency}}$$

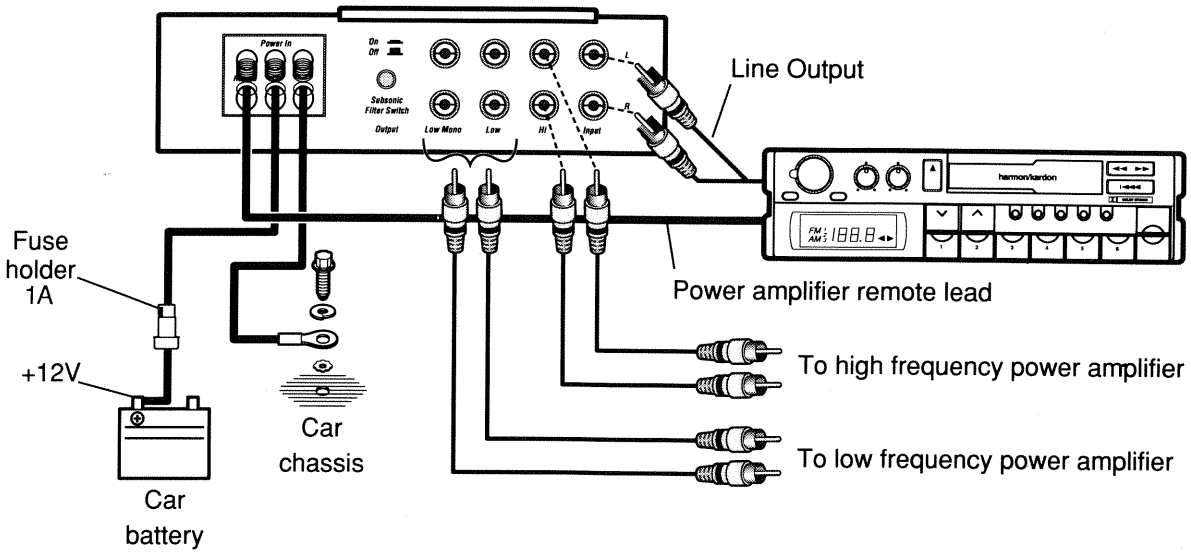
Standard Resistor Value	Crossover Frequency	
2.7KΩ	300Hz	5212-50508272
3.3KΩ	250Hz	5212-50508332
3.9KΩ	200Hz	5212-50508392
4.7KΩ	175Hz	5212-50508472
5.6KΩ	150Hz	5212-50508562
6.8KΩ	120Hz	5212-50508682
8.2KΩ	100Hz	5212-50508822
10KΩ	80Hz	5212-50508103
12KΩ	70Hz	5212-50508123
15KΩ	55Hz	5212-50508153

HOW TO CHANGE THE CROSSOVER FREQUENCY

To replace a resistor module, follow the procedure below:

1. Turn off the car audio system. This will prevent loud "pops" that may damage some speakers.
2. Open the top of the enclosure by removing the 4 screws from the top plate and lifting it away.
3. The resistor module is susceptible to electrostatic breakdown. Touch one of the input or output jacks with your finger to eliminate any static charge.
4. Find the appropriate resistor module on the circuit board. They are marked "high" and "low".
5. Using a small cutting pliers, slowly and gently pull out the module. Be careful not to bend the pins.
6. Insert the new resistor module. They are symmetrical and cannot be inserted backwards. Gently push the module firmly into the socket. Be careful not to bend the pins.
7. Re-install the top plate.
8. Turn on and test the car audio system.





Connections

DISASSEMBLY PROCEDURES (REFER TO PAGE 5)

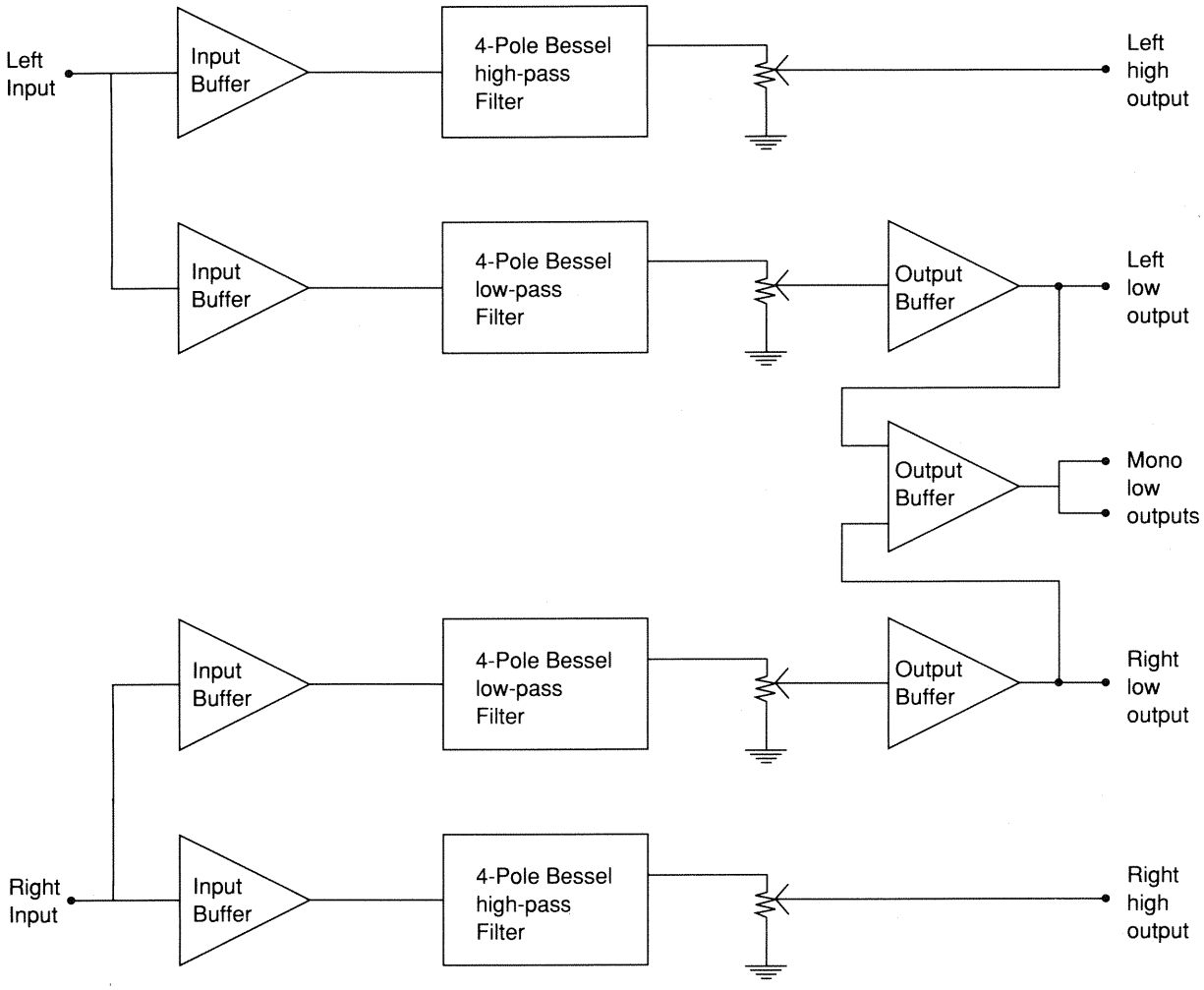
[1] CABINET (131) REMOVAL

1. Remove 4 screws (A) and then remove the Panel (135).
2. Remove 6 screws (B) and then remove the Cabinet (131).

[2] MAIN P.C.BOARD (PCB-1) REMOVAL

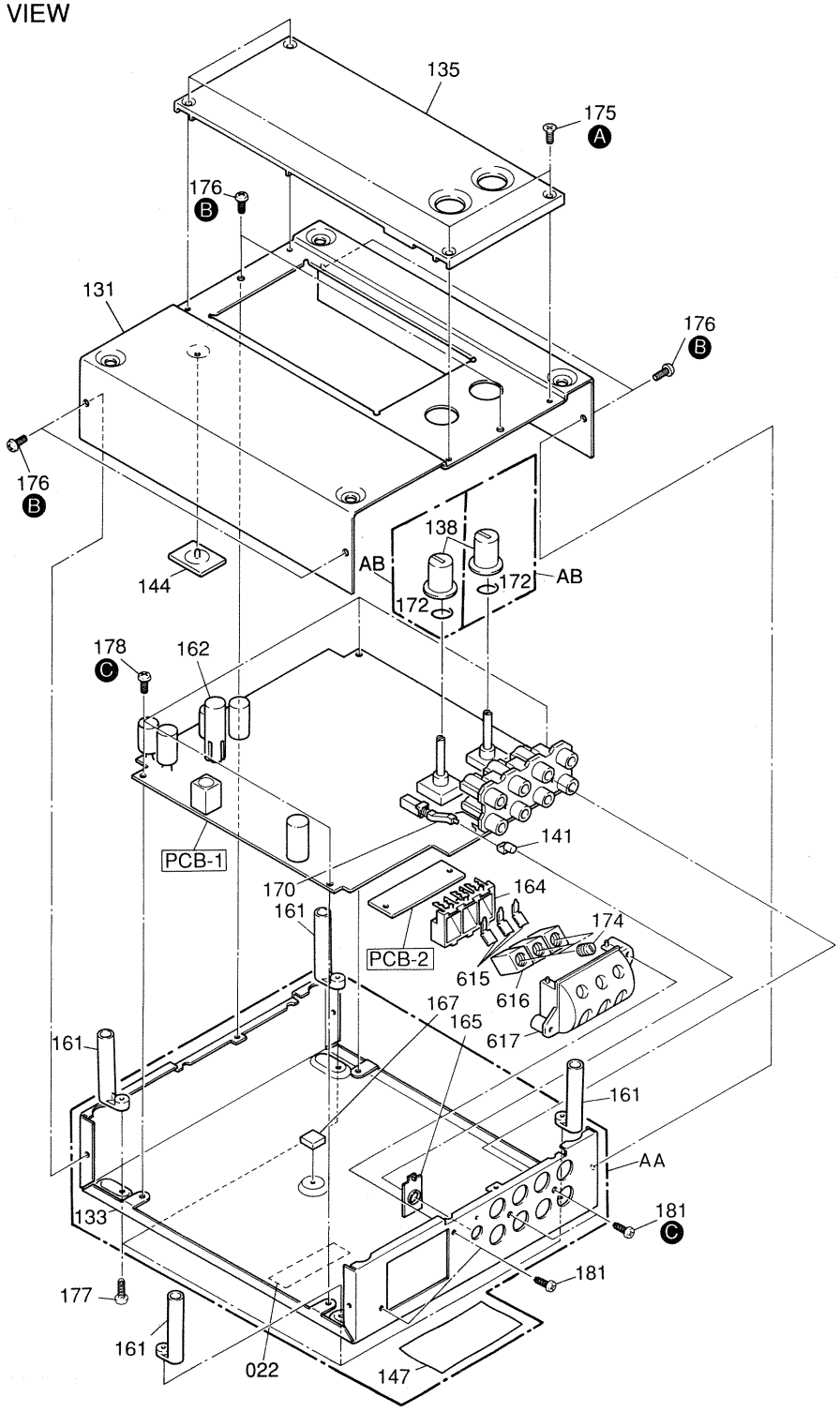
1. Remove the Cabinet (131), referring to the previous step [1].
2. Remove 6 screws (C) and then remove the Main P.C.Board (PCB-1).

BLOCK DIAGRAM



GENERAL UNIT

EXPLODED VIEW



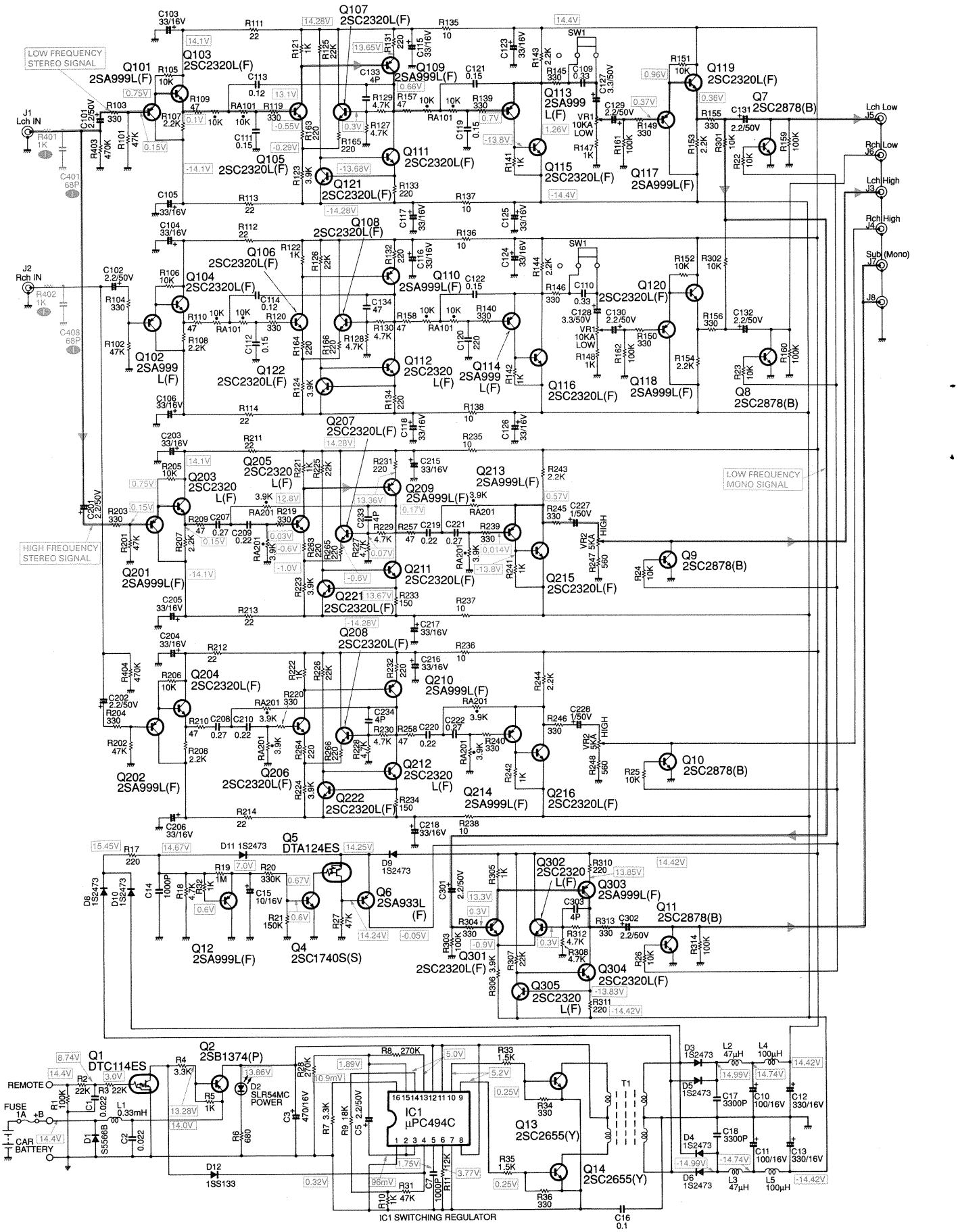
PARTS LIST

Ref. No.	Part No.	Description
AA	A424-HC398LA	CABINET BOTTOM ASSEMBLY
AB	A632-HC398LA	ROTARY KNOB, VOLUME
022	1756-19316	LABEL ◐
131	1414-16801	CABINET
133	1424-35401	CABI BACK
135	1443-13901	PANEL
138	1632-21401	ROTARY KNOB (x2)
141	1662-66101	PUSH BUTTON
144	1732-08501	INDICATOR
147	1751-10018	LABEL
161	2132-7170	SPACER (x4)
162	2132-7171	SPACER
164	2240-7388	HOLDER
165	2240-7390	HOLDER
167	2112-11803	SPONGE
170	2601-7200	SHAFT
172	2651-110518	SPRING(x2)
174	2310-7039	SCREW,SPE (x3)
175	2343-300847	SCREW,CSK T+ (x4)
176	2342-260547	SCREW,PAN T+ (x6)
177	2347-R0126054	SCREW,BND T+ (x4)
178	2347-300627	SCREW,BND T+ (x4)
181	2347-R0130084	SCREW,BNDT+ (x4)

SCHEMATIC DIAGRAM

NOTES:
1. ALL RESISTANCES VALUES ARE IN Ω. kΩ = 1000Ω, MΩ = 1000kΩ.
2. THE WATTAGE OF RESISTORS IS 1/6W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTERWISE NOTED. P = μμF.
4. V : DC VOLTAGE AT NO SIGNAL.

: SIGNAL GROUND : CHASSIS GROUND



ELECTRICAL PARTS LIST

Ser. No.	Ref. No.	Part No.	Description
		PCB-1 MAIN P.C.BOARD	
		CAPACITORS	
573	C1	5359-S010J223	CAP,PPP .022µ
573	C2	5359-S010J223	CAP,PPP .022µ
572	C3	5345-477C041	CAP,MINI ELE 470µ/16V
571	C5	5345-225F041	CAP,MINI ELE 2.2µ/50V
574	C7	5359-S010J102	CAP,PPP 1000P
569	C10	5345-107C041	CAP,MINI ELE 100µ/16V
569	C11	5345-107C041	CAP,MINI ELE 100µ/16V
570	C12	5345-337C041	CAP,MINI ELE 330µ/16V
570	C13	5345-337C041	CAP,MINI ELE 330µ/16V
598	C14	5359-S010J102	CAP,PPP 1000P
597	C15	5345-106C0951	CAP,MINI ELE 10µ/16V
515	C16	5354-104593	CAP,MYL .1µ
587	C17	5359-S010J332	CAP,PPP 3300P
587	C18	5359-S010J332	CAP,PPP 3300P
506	C101	5345-S19FM225	CAP,MINI ELE 2.2µ/50V
506	C102	5345-S19FM225	CAP,MINI ELE 2.2µ/50V
509	C103	5345-336C041	CAP,MINI ELE 33µ/16V
509	C104	5345-336C041	CAP,MINI ELE 33µ/16V
509	C105	5345-336C041	CAP,MINI ELE 33µ/16V
509	C106	5345-336C041	CAP,MINI ELE 33µ/16V
516	C109	5354-334593	CAP,MYL .33µ
516	C110	5354-334593	CAP,MYL .33µ
512	C111	5354-154593	CAP,MYL .15µ
512	C112	5354-154593	CAP,MYL .15µ
511	C113	5354-124593	CAP,MYL .12µ
511	C114	5354-124593	CAP,MYL .12µ
509	C115	5345-336C041	CAP,MINI ELE 33µ/16V
509	C116	5345-336C041	CAP,MINI ELE 33µ/16V
509	C117	5345-336C041	CAP,MINI ELE 33µ/16V
509	C118	5345-336C041	CAP,MINI ELE 33µ/16V
512	C119	5354-154593	CAP,MYL .15µ
512	C120	5354-154593	CAP,MYL .15µ
512	C121	5354-154593	CAP,MYL .15µ
512	C122	5354-154593	CAP,MYL .15µ
509	C123	5345-336C041	CAP,MINI ELE 33µ/16V
509	C124	5345-336C041	CAP,MINI ELE 33µ/16V
509	C125	5345-336C041	CAP,MINI ELE 33µ/16V
509	C126	5345-336C041	CAP,MINI ELE 33µ/16V
508	C127	5345-S19FM335	CAP,MINI ELE 3.3µ/50V
508	C128	5345-S19FM335	CAP,MINI ELE 3.3µ/50V
506	C129	5345-S19FM225	CAP,MINI ELE 2.2µ/50V
506	C130	5345-S19FM225	CAP,MINI ELE 2.2µ/50V
506	C131	5345-S19FM225	CAP,MINI ELE 2.2µ/50V
506	C132	5345-S19FM225	CAP,MINI ELE 2.2µ/50V
510	C133	5353-040934	CAP,MCA 4P
510	C134	5353-040934	CAP,MCA 4P
506	C201	5345-S19FM225	CAP,MINI ELE 2.2µ/50V
506	C202	5345-S19FM225	CAP,MINI ELE 2.2µ/50V
509	C203	5345-336C041	CAP,MINI ELE 33µ/16V
509	C204	5345-336C041	CAP,MINI ELE 33µ/16V
509	C205	5345-336C041	CAP,MINI ELE 33µ/16V
509	C206	5345-336C041	CAP,MINI ELE 33µ/16V
513	C207	5354-274593	CAP,MYL .27µ
513	C208	5354-274593	CAP,MYL .27µ
514	C209	5354-224593	CAP,MYL .22µ
514	C210	5354-224593	CAP,MYL .22µ
509	C215	5345-336C041	CAP,MINI ELE 33µ/16V
509	C216	5345-336C041	CAP,MINI ELE 33µ/16V
509	C217	5345-336C041	CAP,MINI ELE 33µ/16V
509	C218	5345-336C041	CAP,MINI ELE 33µ/16V
514	C219	5354-224593	CAP,MYL .22µ
514	C220	5354-224593	CAP,MYL .22µ
513	C221	5354-274593	CAP,MYL .27µ
513	C222	5354-274593	CAP,MYL .27µ
507	C227	5345-S19FM105	CAP,MINI ELE 1µ/50V
507	C228	5345-S19FM105	CAP,MINI ELE 1µ/50V
510	C233	5353-040934	CAP,MCA 4P
510	C234	5353-040934	CAP,MCA 4P
506	C301	5345-S19FM225	CAP,MINI ELE 2.2µ/50V
506	C302	5345-S19FM225	CAP,MINI ELE 2.2µ/50V
510	C303	5353-040934	CAP,MCA 4P
041A	C401	5353-680934	CAP,MCA 68P●
041A	C402	5353-680934	CAP,MCA 68P●
		RESISTORS	
579	R1	5135-104522	RES,CBN 1/2P 100K
580	R2	5135-223522	RES,CBN 1/2P 22K
580	R3	5135-223522	RES,CBN 1/2P 22K
588	R4	5135-332522	RES,CBN 1/2P 3.3K
581	R5	5135-102522	RES,CBN 1/2P 1K
586	R6	5135-681522	RES,CBN 1/2P 680
588	R7	5135-332522	RES,CBN 1/2P 3.3K
623	R8	5232-274J16P	RES,CBN 1/6P 270K
583	R9	5135-183522	RES,CBN 1/2P 18K
581	R10	5135-102522	RES,CBN 1/2P 1K
584	R11	5135-123522	RES,CBN 1/2P 12K
600	R17	5135-221522	RES,CBN 1/2P 220
601	R18	5135-472522	RES,CBN 1/2P 4.7K
602	R19	5135-105522	RES,CBN 1/2P 1M
604	R20	5135-334522	RES,CBN 1/2P 330K
603	R21	5135-154522	RES,CBN 1/2P 150K
599	R22	5135-103522	RES,CBN 1/2P 10K
599	R23	5135-103522	RES,CBN 1/2P 10K
599	R24	5135-103522	RES,CBN 1/2P 10K
599	R25	5135-103522	RES,CBN 1/2P 10K
599	R26	5135-103522	RES,CBN 1/2P 10K
605	R27	5135-473522	RES,CBN 1/2P 47K
582	R28	5135-274522	RES,CBN 1/2P 270K
590	R31	5135-473522	RES,CBN 1/2P 47K
606	R32	5135-102522	RES,CBN 1/2P 1K
621	R33	5232-152J16P	RES,CBN 1/6P 1.5K
622	R34	5232-331J16P	RES,CBN 1/6P 330
621	R35	5232-152J16P	RES,CBN 1/6P 1.5K
622	R36	5232-331J16P	RES,CBN 1/6P 330
533	R101	5135-473522	RES,CBN 1/2P 47K
533	R102	5135-473522	RES,CBN 1/2P 47K
534	R103	5135-331522	RES,CBN 1/2P 330
534	R104	5135-331522	RES,CBN 1/2P 330
543	R105	5135-103522	RES,CBN 1/2P 10K
543	R106	5135-103522	RES,CBN 1/2P 10K
537	R107	5135-222522	RES,CBN 1/2P 2.2K
537	R108	5135-222522	RES,CBN 1/2P 2.2K
548	R109	5135-470522	RES,CBN 1/2P 47
548	R110	5135-470522	RES,CBN 1/2P 47
544	R111	5135-220522	RES,CBN 1/2P 22
544	R112	5135-220522	RES,CBN 1/2P 22
544	R113	5135-220522	RES,CBN 1/2P 22
544	R114	5135-220522	RES,CBN 1/2P 22
534	R119	5135-331522	RES,CBN 1/2P 330
534	R120	5135-331522	RES,CBN 1/2P 330
531	R121	5135-102522	RES,CBN 1/2P 1K
531	R122	5135-102522	RES,CBN 1/2P 1K
540	R123	5135-392522	RES,CBN 1/2P 3.9K
540	R124	5135-392522	RES,CBN 1/2P 3.9K
541	R125	5135-223522	RES,CBN 1/2P 22K
541	R126	5135-223522	RES,CBN 1/2P 22K
542	R127	5135-472522	RES,CBN 1/2P 4.7K
542	R128	5135-472522	RES,CBN 1/2P 4.7K
542	R129	5135-472522	RES,CBN 1/2P 4.7K
542	R130	5135-472522	RES,CBN 1/2P 4.7K
546	R131	5135-221522	RES,CBN 1/2P 220
546	R132	5135-221522	RES,CBN 1/2P 220
546	R133	5135-221522	RES,CBN 1/2P 220
546	R134	5135-221522	RES,CBN 1/2P 220
545	R135	5135-100522	RES,CBN 1/2P 10
545	R136	5135-100522	RES,CBN 1/2P 10
545	R137	5135-100522	RES,CBN 1/2P 10
545	R138	5135-100522	RES,CBN 1/2P 10
534	R139	5135-331522	RES,CBN 1/2P 330
534	R140	5135-331522	RES,CBN 1/2P 330
531	R141	5135-102522	RES,CBN 1/2P 1K
531	R142	5135-102522	RES,CBN 1/2P 1K
537	R143	5135-222522	RES,CBN 1/2P 2.2K
537	R144	5135-222522	RES,CBN 1/2P 2.2K
554	R145	5232-331J16P	RES,CBN 1/6P 330
554	R146	5232-331J16P	RES,CBN 1/6P 330
531	R147	5135-102522	RES,CBN 1/2P 1K
531	R148	5135-102522	RES,CBN 1/2P 1K

Ser. No.	Ref. No.	Part No.	Description
535	R149	5135-331522	RES,CBN 1/2P 330
535	R150	5135-331522	RES,CBN 1/2P 330
543	R151	5135-103522	RES,CBN 1/2P 10K
543	R152	5135-103522	RES,CBN 1/2P 10K
539	R153	5135-222522	RES,CBN 1/2P 2.2K
539	R154	5135-222522	RES,CBN 1/2P 2.2K
535	R155	5135-331522	RES,CBN 1/2P 330
535	R156	5135-331522	RES,CBN 1/2P 330
548	R157	5135-470522	RES,CBN 1/2P 47
548	R158	5135-470522	RES,CBN 1/2P 47
550	R159	5232-104J16P	RES,CBN 1/6P 100K
538	R160	5135-104522	RES,CBN 1/2P 100K
538	R161	5135-104522	RES,CBN 1/2P 100K
538	R162	5135-104522	RES,CBN 1/2P 100K
555	R163	5232-221J16P	RES,CBN 1/6P 220
555	R164	5232-221J16P	RES,CBN 1/6P 220
555	R165	5232-221J16P	RES,CBN 1/6P 220
555	R166	5232-221J16P	RES,CBN 1/6P 220
533	R201	5135-473522	RES,CBN 1/2P 47K
533	R202	5135-473522	RES,CBN 1/2P 47K
535	R203	5135-331522	RES,CBN 1/2P 330
535	R204	5135-331522	RES,CBN 1/2P 330
543	R205	5135-103522	RES,CBN 1/2P 10K
543	R206	5135-103522	RES,CBN 1/2P 10K
537	R207	5135-222522	RES,CBN 1/2P 2.2K
537	R208	5135-222522	RES,CBN 1/2P 2.2K
548	R209	5135-470522	RES,CBN 1/2P 47
548	R210	5135-470522	RES,CBN 1/2P 47
544	R211	5135-220522	RES,CBN 1/2P 22
544	R212	5135-220522	RES,CBN 1/2P 22
544	R213	5135-220522	RES,CBN 1/2P 22
544	R214	5135-220522	RES,CBN 1/2P 22
535	R219	5135-331522	RES,CBN 1/2P 330
535	R220	5135-331522	RES,CBN 1/2P 330
532	R221	5135-102522	RES,CBN 1/2P 1K
532	R222	5135-102522	RES,CBN 1/2P 1K
540	R223	5135-392522	RES,CBN 1/2P 3.9K
540	R224	5135-392522	RES,CBN 1/2P 3.9K
541	R225	5135-223522	RES,CBN 1/2P 22K
541	R226	5135-223522	RES,CBN 1/2P 22K
542	R227	5135-472522	RES,CBN 1/2P 4.7K
542	R228	5135-472522	RES,CBN 1/2P 4.7K
542	R229	5135-472522	RES,CBN 1/2P 4.7K
542	R230	5135-472522	RES,CBN 1/2P 4.7K
546	R231	5135-221522	RES,CBN 1/2P 220
546	R232	5135-221522	RES,CBN 1/2P 220
547	R233	5135-151522	RES,CBN 1/2P 150
547	R234	5135-151522	RES,CBN 1/2P 150
545	R235	5135-100522	RES,CBN 1/2P 10
545	R236	5135-100522	RES,CBN 1/2P 10
545	R237	5135-100522	RES,CBN 1/2P 10
545	R238	5135-100522	RES,CBN 1/2P 10
536	R239	5135-331522	RES,CBN 1/2P 330
536	R240	5135-331522	RES,CBN 1/2P 330
532	R241	5135-102522	RES,CBN 1/2P 1K
532	R242	5135-102522	RES,CBN 1/2P 1K
539	R243	5135-222522	RES,CBN 1/2P 2.2K
539	R244	5135-222522	RES,CBN 1/2P 2.2K
554	R245	5232-331J16P	RES,CBN 1/6P 330
554	R246	5232-331J16P	RES,CBN 1/6P 330
549	R247	5135-561522	RES,CBN 1/2P 560
549	R248	5135-561522	RES,CBN 1/2P 560
548	R257	5135-470522	RES,CBN 1/2P 47
548	R258	5135-470522	RES,CBN 1/2P 47
555	R263	5232-221J16P	RES,CBN 1/6P 220
555	R264	5232-221J16P	RES,CBN 1/6P 220
555	R265	5232-221J16P	RES,CBN 1/6P 220
555	R266	5232-221J16P	RES,CBN 1/6P 220
543	R301	5135-103522	RES,CBN 1/2P 10K
543	R302	5135-103522	RES,CBN 1/2P 10K
550	R303	5232-104J16P	RES,CBN 1/6P 100K
554	R304	5232-331J16P	RES,CBN 1/6P 330
532	R305	5135-102522	RES,CBN 1/6P 1K
557	R306	5232-392J16P	RES,CBN 1/6P 3.9K
551	R307	5232-223J16P	RES,CBN 1/6P 22K
542	R308	5135-472522	RES,CBN 1/2P 4.7K
553	R310	5232-221J16P	RES,CBN 1/6P 220
546	R311	5135-221522	RES,CBN 1/2P 220
542	R312	5135-472522	RES,CBN 1/2P 4.7K
536	R313	5135-331522	RES,CBN 1/2P 330
538	R314	5135-104522	RES,CBN 1/2P 100K
042A	R401	5135-102522	RES,CBN 1/2P 1K
042A	R402	5135-102522	RES,CBN 1/2P 1K
556	R403	5135-474522	RES,CBN 1/2P 470K
556	R404	5135-474522	RES,CBN 1/2P 470K
			INTEGRATED CIRCUIT
561	IC1	5653-UPC494C	IC,LINEAR
			TRANSISTORS
563	Q1	5613-C114ES	XISTOR,NPN R
562	Q2	5612-1374(P)	XISTOR,PNP A
592	Q4	5613-1740S(S)	XISTOR,NPN R
595	Q5	5611-A124ES	XISTOR,PNP R
593	Q6	5611-933S(S)	XISTOR,PNP R
591	Q7	5613-2878(B)	XISTOR,NPN R
591	Q8	5613-2878(B)	XISTOR,NPN R
591	Q9	5613-2878(B)	XISTOR,NPN R
591	Q10	5613-2878(B)	XISTOR,NPN R
591	Q11	5613-2878(B)	XISTOR,NPN R
594	Q12	5611-999L(F)	XISTOR,PNP R
585	Q13	5613-2655(Y)	XISTOR,NPN R
585	Q14	5613-2655(Y)	XISTOR,NPN R
501	Q101	5611-999L(F)	XISTOR,PNP R
501	Q102	5611-999L(F)	XISTOR,PNP R
503	Q103	5613-2320L(F)	XISTOR,NPN R
503	Q104	5613-2320L(F)	XISTOR,NPN R
503	Q105	5613-2320L(F)	XISTOR,NPN R
503	Q106	5613-2320L(F)	XISTOR,NPN R
503	Q107	5613-2320L(F)	XISTOR,NPN R
503	Q108	5613-2320L(F)	XISTOR,NPN R
501	Q109	5611-999L(F)	XISTOR,PNP R
501	Q110	5611-999L(F)	XISTOR,PNP R
503	Q111	5613-2320L(F)	XISTOR,NPN R
503	Q112	5613-2320L(F)	XISTOR,NPN R
501	Q113	5611-999L(F)	XISTOR,PNP R
501	Q114	5611-999L(F)	XISTOR,PNP R
503	Q115	5613-2320L(F)	XISTOR,NPN R
503	Q116	5613-2320L(F)	XISTOR,NPN R
501	Q117	5611-999L(F)	XISTOR,PNP R
501	Q118	5611-999L(F)	XISTOR,PNP R
503	Q119	5613-2320L(F)	XISTOR,NPN R
503	Q120	5613-2320L(F)	XISTOR,NPN R
503	Q121	5613-2320L(F)	XISTOR,NPN R
503	Q122	5613-2320L(F)	XISTOR,NPN R
502	Q201	5611-999L(F)	XISTOR,PNP R
502	Q202	5611-999L(F)	XISTOR,PNP R
504	Q203	5613-2320L(F)	XISTOR,NPN R
504	Q204	5613-2320L(F)	XISTOR,NPN R
504	Q205	5613-2320L(F)	XISTOR,NPN R
504	Q206	5613-2320L(F)	XISTOR,NPN R
504	Q207	5613-2320L(F)	XISTOR,NPN R
504	Q208	5613-2320L(F)	XISTOR,NPN R
502	Q209	5611-999L(F)	XISTOR,PNP R
502	Q210	5611-999L(F)	XISTOR,PNP R
504	Q211	5613-2320L(F)	XISTOR,NPN R
504	Q212	5613-2320L(F)	XISTOR,NPN R
502	Q213	5611-999L(F)	XISTOR,PNP R
502	Q214	5611-999L(F)	XISTOR,PNP R
504	Q215	5613-2320L(F)	XISTOR,NPN R
504	Q216	5613-2320L(F)	XISTOR,NPN R
504	Q221	5613-2320L(F)	XISTOR,NPN R
504	Q222	5613-2320L(F)	XISTOR,NPN R
505	Q301	5613-2320L(F)	XISTOR,NPN R
505	Q302	5613-2320L(F)	XISTOR,NPN R
502	Q303	5611-999L(F)	XISTOR,PNP R
505	Q304	5613-2320L(F)	XISTOR,NPN R
505	Q305	5613-2320L(F)	XISTOR,NPN R

Ser. No.	Ref. No.	Part No.	Description
		DIODES	
566	D1	5632-S5566B	DIODE,RECT
565	D2	5637-SLR54MC	LED
568	D3	5631-1S2473	DIODE,DET
568	D4	5631-1S2473	DIODE,DET
568	D5	5631-1S2473	DIODE,DET
568	D6	5631-1S2473	DIODE,DET
596	D8	5631-1S2473	DIODE,DET
596	D9	5631-1S2473	DIODE,DET
596	D10	5631-1S2473	DIODE,DET
596	D11	5631-1S2473	DIODE,DET
567	D12	5631-1SS133	DIODE,DET
		MISCELLANEOUS	
610	J1-4	4489-04001004	PIN JACK,MLT
610	J5-8	4489-04001004	PIN JACK,MLT
627	JL1	4242-R0503800	JUMPER LEAD
575	L1	5995-331175	COIL W/CORE
576	L2	5995-470M74	COIL W/CORE
576	L3	5995-470M74	COIL W/CORE
577	L4	5995-101M74	COIL W/CORE
577	L5	5995-101M74	COIL W/CORE
521	RA101	5212-S0508103	R COMPOSITE, RESISTOR BLOCK, 10 Kohm×8, ±5%, 1/5W
522	RA201	5212-S0508392	R COMPOSITE, RESISTOR BLOCK, 3.9 Kohm×8, ±5%, 1/5W
523	SO101	4474-03001	SOCKET, RA101
523	SO201	4474-03001	SOCKET, RA201
611	SW1	4431-S0601102	SWITCH,PUSH
578	T1	5933-S2101	COIL CASE,10
612	VR1	5109-S0601103	RES,V CBN 10K
613	VR2	5109-S0602502	RES,V CBN 5K

PCB-2 TERMINAL P.C.BOARD

		MISCELLANEOUS	
615		4214-236	TERMINAL (x3)
616		4214-237	TERMINAL (x3)
617		4215-09802	TERMINAL BRD

ABBREVIATIONS IN PARTS LIST

CAPACITORS

CAP, MINI ELE : Electrolytic
CAP, CER : Ceramic
CAP, PPP : Polypropylene
CAP, MYL : Mylar
CAP, MCA : Mica
470μ : 470μF
6800P : 6800PF
.047μ : 0.047μF

RESISTORS

RES, CBN 1/6P : Carbon 1/6W
2.2K : 2.2kΩ
220 : 220Ω

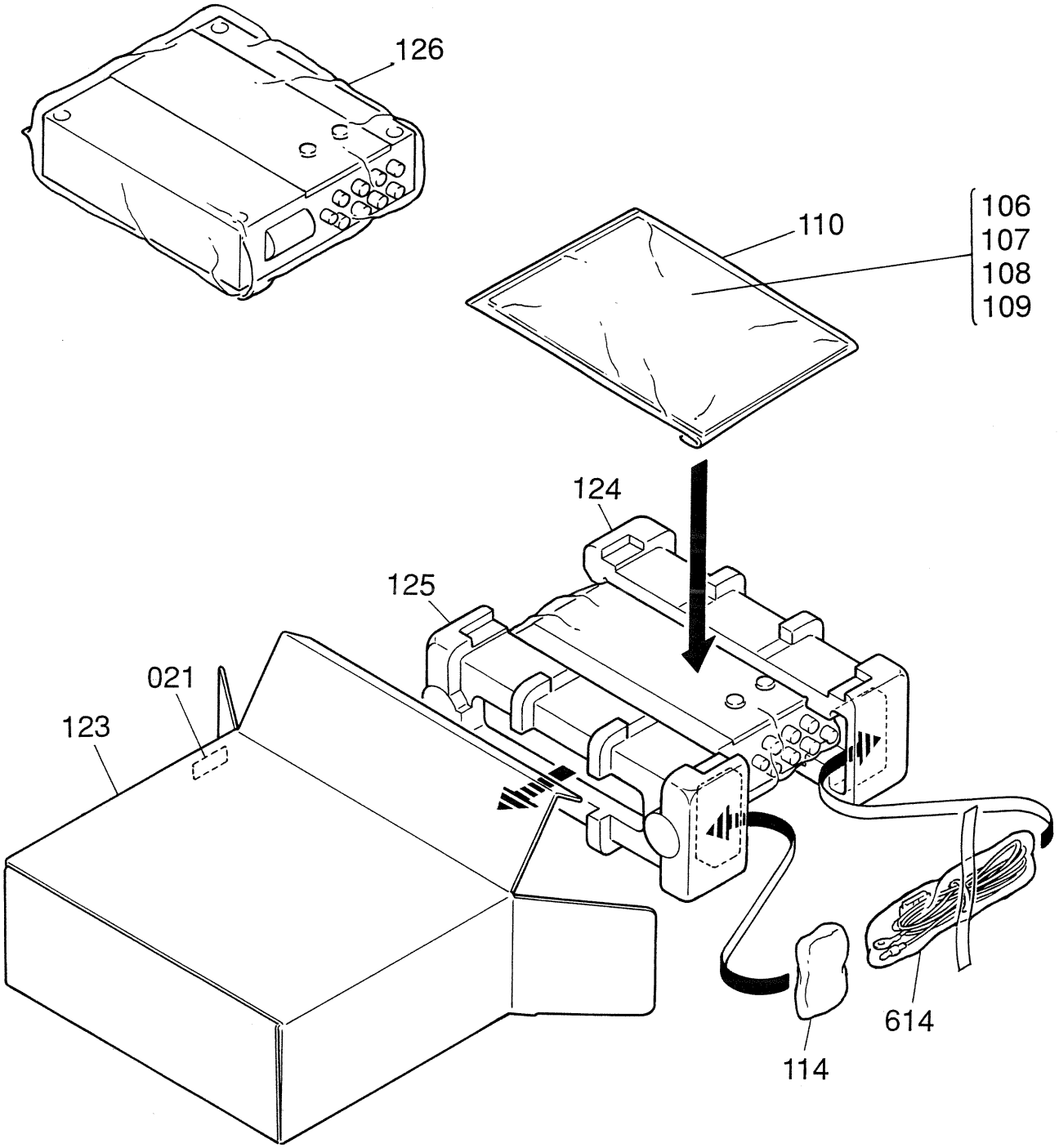
TRANSISTORS

XISTOR : Transistor
FET : Field Effect Transistor

CONTROLS

RES, V CBN : Variable Carbon Resistor

PACKAGE

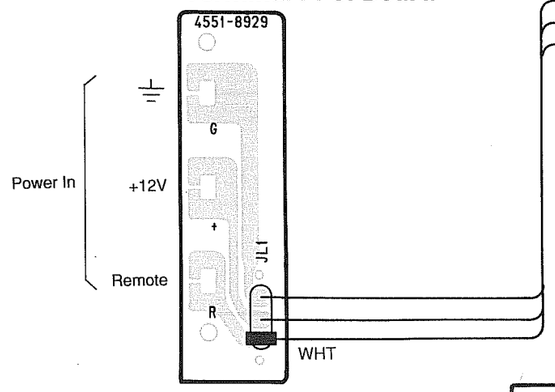


PARTS LIST

Ref. No.	Part No.	Description
021	1756-03108	LABEL (I)
021	1756-03113	LABEL (N)
106	1111-J30351	OWNER GUIDE
106	1111-J30352	OWNER GUIDE (I)
106	1111-J2058	OWNER GUIDE (N)
107	1113-717004	OWNER CARD, REPLY (UA)
107	1113-0C	OWNER CARD (N)
108	1116-03901	GUARANT CARD (UA)
108	1116-GC	GUARANT CARD (N)
109	1119-04401	ATTACH SHEET (UA)
110	1241-R0118250	POLYETHY BAG
114	2310-7040	SCREW,SPE
123	1221-30101	CARTON BOX
124	1222-7382	CUSHION, L
125	1222-7383	CUSHION, R
126	1241-R0125300	POLYETHY BAG
614	4171-01101	WIRING KIT (W/FUSE P/N: 5732-01401102)

P.C.BOARD

PCB-2
Terminal P. C. Board



PCB-1
Main P. C. Board

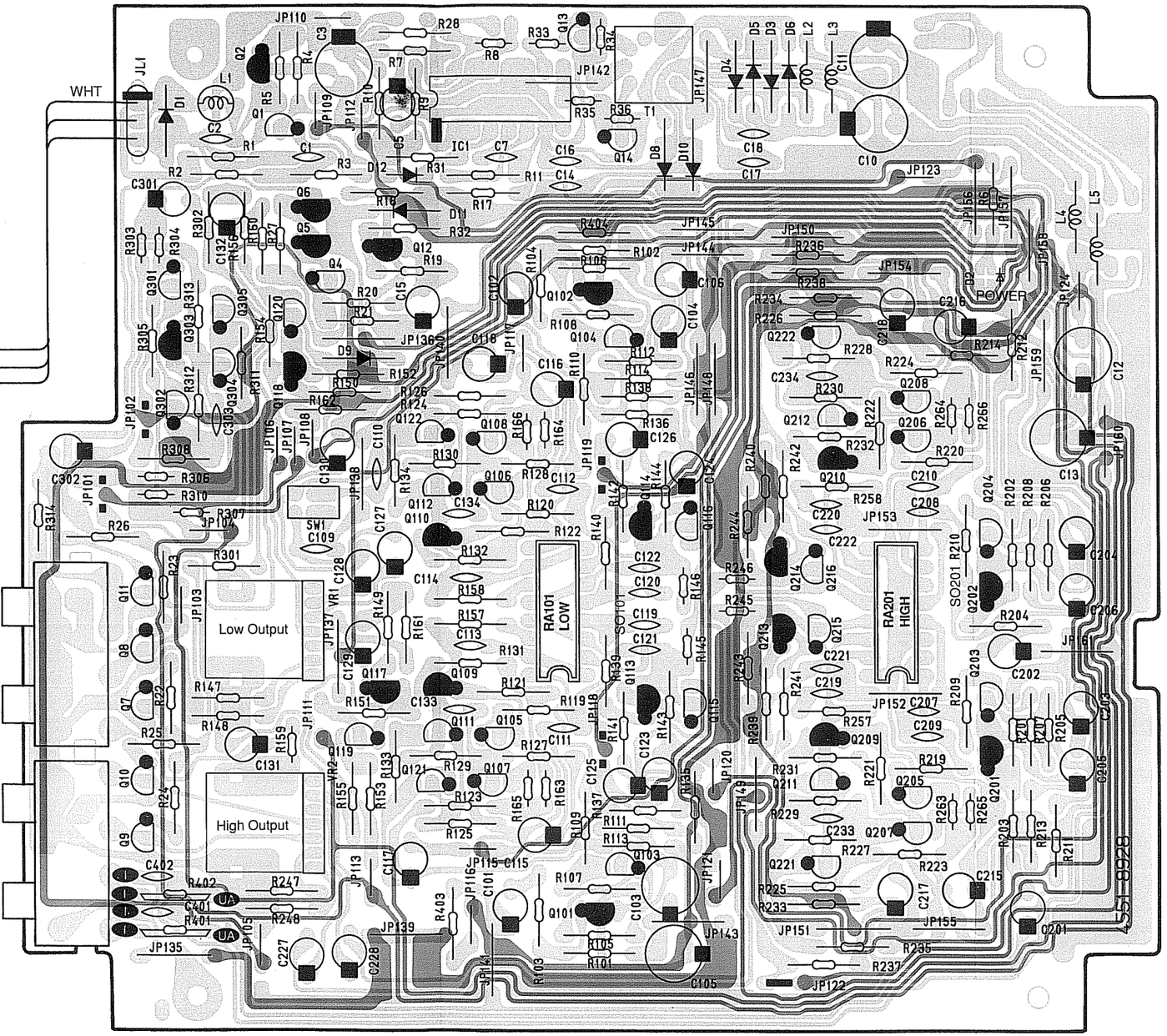
SW1
Subsonic
Filter Switch

Output Low Mono J8 J7

Output Low R J6 L J5

Output Hi R J4 L J3

Input R J2 L J1



IC1 : μPC494C
SWITCHING REGULATOR